## (19) World Intellectual Property **Organization**

International Bureau



## 

(43) International Publication Date 3 March 2005 (03.03.2005)

PCT

## (10) International Publication Number WO 2005/019107 A1

(51) International Patent Classification7: C01G 23/07, C01B 13/14

C01B 33/18,

(21) International Application Number:

PCT/EP2004/006718

(22) International Filing Date: 22 June 2004 (22.06.2004)

(25) Filing Language:

**English** 

(26) Publication Language:

**English** 

(30) Priority Data:

103 38 219.4 20 August 2003 (20.08.2003) DE 103 42 827.5 17 September 2003 (17.09.2003)

(71) Applicant (for all designated States except US): DE-GUSSA AG [DE/DE]; Bennigsenplatz 1, 40474 Düsseldorf (DE).

(72) Inventors; and

Inventors/Applicants (for US only): SCHUMACHER, Kai [DE/DE]; Berliner Strasse 16, 65719 Hofheim (DE). FLESCH, Jürgen [DE/DE]; Tumsinger Strasse 227, 79539 Lörrach (DE). HAMM, Volker [DE/DE]; Hauptstrasse 74, 79713 Bad Säckingen (DE).

(74) Common Representative: DEGUSSA AG; Intellectual Property Management, Patente und Marken, Standort Hanau, Postfach 13 45, 63403 Hanau (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR).

Declaration under Rule 4.17:

of inventorship (Rule 4.17(iv)) for US only

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PURIFICATION OF FINELY DIVIDED, PYROGENICALLY PREPARED METAL OXIDE PARTICLES

(57) Abstract: Process for removing halide compounds adhering to finely divided metal oxide particles by means of steam, wherein the metal oxide particles are applied to the upper part of an upright column and migrate downwards by means of gravity, the steam is applied at the bottom end of the column, the metal oxide particles and the steam are fed counter-currently, the metal oxide particles freed of halide residues are removed at the base of the column, steam and halide residues are removed at the head of the column, wherein the column is heated in such a manner that the temperature difference Tbottom - Ttop between the lower part and the upper part of the column is at least 20°C and a maximum temperature of 500°C prevails in the column, and the metal oxide particles have a residence time in the column of from 1 second to 30 minutes.

